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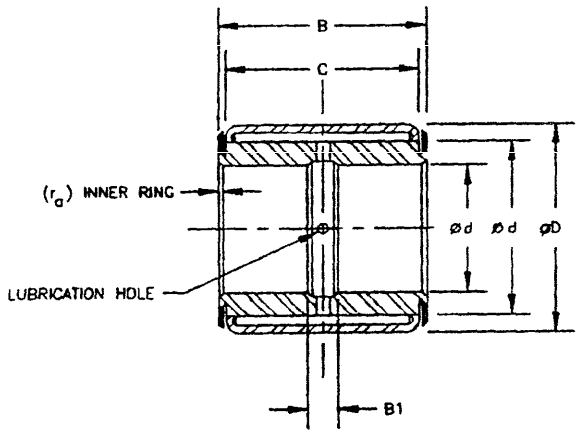

TABLE I — Dimensions in inches

Dash	ød Bore	øD Outer Ring Outside Dia. 2/	B Over-all Width	c Outer Ring Width	$ød_1$ Washer Outside Dia.	B_1 Lubri-cation Groove Width	r_a 1/ Fillet Max.	Radial Internal Clearance Max.	Limit Load Rating Lbs 3/	Mass (approx) lb
-3	.1900	.6250	.625	.500	.562	None	.022	.0015	679	.040
-4	.2500	.6250	.562	.500	.562	None	.022	.0015	878	.025
-5	.3125	.6875	.625	.500	.625	None	.022	.0015	988	.050
-6	.3750	.7500	.812	.750	.688	.188	.022	.0015	1920	.060
-7	.4375	.8125	.875	.750	.750	.188	.032	.0015	2110	.090
-8	.5000	1.0000	.875	.750	.938	.188	.032	.0015	2350	.120
-10	.6250	1.1250	.875	.750	1.062	.250	.032	.0015	2690	.150
-12	.7500	1.2500	1.125	1.000	1.188	.250	.032	.0015	4480	.210
-14	.8750	1.3750	1.125	1.000	1.312	.375	.032	.0015	5000	.240
-16	1.0000	1.5000	1.125	1.000	1.438	.375	.032	.0015	5510	.270
-20	1.2500	1.8750	1.375	1.250	1.812	.375	.032	.0017	8180	.300

TABLE II — Dimensions in millimeters

Dash NO.	ød Bore	øD Outer Ring Outside Dia.	B Over-all Width	c Outer Ring Width	$ød_1$ Washer Outside Dia.	B_1 Lubri-cation Groove Width	r_a 1/ Fillet Max.	Radial Internal Clearance Max.	Limit Load Rating N	Mass (approx) kg
-3	4.826	15.875	15.88	12.70	14.27	None	.6	.038	3020	.018
-4	6.350	15.875	14.27	12.70	14.27	None	.6	.038	3910	.011
-5	7.938	17.462	15.88	12.70	15.88	None	.6	.038	4390	.023
-6	9.525	19.050	20.62	19.05	17.48	4.78	.6	.038	8540	.027
-7	11.112	20.638	22.22	19.05	19.05	4.78	.8	.038	9390	.041
-8	12.700	25.400	22.22	19.05	23.82	4.78	.8	.038	10500	.055
-10	15.875	28.575	22.22	19.05	26.97	6.35	.8	.038	12000	.068
-12	19.050	31.750	28.58	25.40	30.18	6.35	.8	.038	19900	.095
-14	22.223	34.925	28.58	25.40	33.32	9.52	.8	.038	22200	.109
-16	25.400	38.100	28.58	25.40	36.52	9.52	.8	.038	24500	.123
-20	31.750	47.625	34.92	31.75	46.02	9.52	.8	.043	36400	.136

1/ THE CHAMFER ON BEARINGS MUST CLEAR THE MAXIMUM FILLET RADIUS GIVEN IN THE TABLE. THIS SPECIFICATION DOES NOT CONTROL BEARING CHAMFER CONTOURS.
2/ DO NOT MEASURE O.D. WHEN BEARING IS IN FREE STATE. DIMENSIONS ABOVE ARE FOR BASIC OUTSIDE DIAMETER

INACTIVE FOR NEW DESIGN

(H) DENOTES CHANGES

INCH-POUND

PREPARING ACTIVITY: NAVY-AS CUSTODIANS: ARMY- AT NAVY- AS AIR FORCE- 99 DLA- REVIEW: AF-84 DLA-IS USER: PROJECT NUMBER: 3110-0855	MILITARY SPECIFICATION SHEET TITLE BEARING, ROLLER, NEEDLE-SINGLE ROW, THIN SHELL, TYPE II, ANTIFRICTION	SPECIFICATION SHEET NUMBER MS24462 05 DEC 94 REV H SUPERSEDING MS24462 G 17 JUN 77 AMSC- N/A FSC 3110

DISTRIBUTION STATEMENT
A. Approved for public release; distribution is unlimited

DD Form 672, MAY 88 PREVIOUS EDITIONS ARE OBSOLETE

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TABLE III – TOLERANCE LIMITS DIMENSIONS IN INCHES

⌀d BASIC BORE MEAN		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN $⌀d_{mp}$		ALLOWABLE DEVIATION FROM OVER-ALL WIDTH, B		ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, $⌀d_1$		ALLOWABLE DEVIATION FROM LUBRICATION GROOVE WIDTH, B_1		⌀D BASIC OUTER RING OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN $⌀D_{mp}$		ALLOWABLE DEVIATION FROM OUTER RING WIDTH, C	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	OVER	INCL	HIGH	LOW	HIGH	LOW
.1250	1.2500	+.0000	-.005 -.005	+.0000	-.005	+.010	-.010	+.0000	-.062	.5625	1.8750	+.0005	-.0005	+.0000	-.010

TABLE IV DIMENSIONS IN MILLIMETERS

⌀d BASIC BORE MEAN		ALLOWABLE DEVIATION FROM d OF SINGLE MEAN $⌀d_{mp}$		ALLOWABLE DEVIATION FROM OVER-ALL WIDTH, B		ALLOWABLE DEVIATION FROM WASHER OUTSIDE DIA, $⌀d_1$		ALLOWABLE DEVIATION FROM LUBRICATION GROOVE WIDTH, B_1		⌀D BASIC OUTER RING OUTSIDE DIA		ALLOWABLE DEVIATION FROM D OF SINGLE MEAN $⌀D_{mp}$		ALLOWABLE DEVIATION FROM OUTER RING WIDTH, C	
OVER	INCL	HIGH	LOW	HIGH	LOW	HIGH	LOW	HIGH	LOW	OVER	INCL	HIGH	LOW	HIGH	LOW
3.175	31.750	+.0000	-.013	+.0000	-.13	+.25	-.25	+.0000	-1.60	14.288	47.625	+.013	-.013	+.0000	-.25

TABLE V OIL HOLE DATA

BORE-DASH NO.		NUMBER OF HOLES
OVER	INCL	INNER RING
2	5	None
5	10	2
10	20	4

REQUIREMENTS:

1. MATERIAL: STEEL, MIL-S-8690, FED. STD. NO. 66, AISI/SAE STEEL No. 50100, 51100 AND 52100.

(H) 2. FINISH:
   A. PLATING: ZINC-NICKEL PLATE, AMS 2417, TYPE 2, OR CADMIUM PLATED IN ACCORDANCE WITH QQ-P-416, TYPE II, CLASS 2, TO A MINIMUM THICKNESS OF .0003 to .0006 INCHES.
   B. MACHINE FINISH: ANSI/ASME B46.1, SEE PROCUREMENT SPECIFICATION.

3. LUBRICANT: MIL-G-81322 OR MIL-G-23827. ALL BEARINGS SHALL BE PREPACKED WITH GREASE CONFORMING TO MIL-G-81322 UNLESS OTHERWISE SPECIFIED. ALL BEARINGS SHALL BE FILLED 80% MINIMUM WITH GREASE. IF MIL-G-23827 IS REQUIRED, ADD THE LETTER "L" AFTER THE MS21439 DASH NUMBER. IF A RELUBRICATION GROOVE IS DESIRED, ADD THE CODE "G" AFTER THE MS21439 DASH NUMBER AND BEFORE THE LUBRICANT DESIGNATOR IF APPLICABLE. MIL-G-23827 SHALL NOT BE USED FOR OPERATIONS WHERE TEMPERATURES EXCEED 250° F.

4. MARKING: THE MARKING SHALL CONSIST OF THE MS PART NUMBER AND THE MANUFACTURER'S IDENTIFICATION IN ACCORDANCE WITH MIL-STD-130.

5. PART NUMBER: THE MS PART NUMBER SHALL CONSIST OF THE MS NUMBER PLUS THE DASH NUMBER.

EXAMPLE: MS24462-106 L G

- G — RELUBRICATION GROOVE
- L — LUBRICANT DESIGNATOR
- 106 — DASH NUMBER
- MS24462 — MILITARY SPECIFICATION SHEET NUMBER

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6. PACKAGING: BEARINGS SHALL BE INDIVIDUALLY PACKAGED TO THE REQUIREMENTS OF MIL-P-197. PACKAGE MARKED WITH MANUFACTURER'S NAME OR TRADEMARK, AND DATE OF LUBRICATION BY MONTH AND YEAR.

7. DIMENSIONS: ALL DIMENSIONS ARE AFTER PLATING AND ARE IN INCHES.

8. LOAD RATING: THE LIMIT LOAD RATING LISTED CAN BE DEFINED AS THE MAXIMUM RADIAL LOAD WHICH CAN BE APPLIED TO A BEARING WITHOUT IMPAIRING THE SUBSEQUENT FUNCTIONING OF THE BEARING. THE ULTIMATE OR STATIC FRACTURE LOAD RATING IS NOT LESS THAN 1.5 TIMES THE LIMIT LOAD RATING. THE LOAD RATING AS A TRACK ROLLER IS THE LOAD THE BEARING WILL CARRY AS A TRACK ROLLER FOR AN L-10 LIFE OF 20,000 REVOLUTIONS.

9. RADIAL INTERNAL CLEARANCE SHALL BE .0018 MAX.

10. TEMPERATURE: BEARING OPERATING TEMPERATURE RANGE -65° F TO 350° F.

NOTES:

1. REFERENCED DOCUMENTS ARE THE ISSUES IN EFFECT AT THE DATE OF INVITATION FOR BID.
2. FOR DESIGN FEATURE PURPOSES, THIS TAKES PRECEDENCE OVER PROCUREMENT DOCUMENTS HEREIN.

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